

WHAT IS CLAIMED IS:

1 1. A method of eliciting a secretory IgA-mediated immune response in
2 a subject comprising the step of administering to at least one mucosal surface of the
3 subject a non-toxic *Pseudomonas* exotoxin A-like ("PE-like") chimeric immunogen
4 comprising: (1) a cell recognition domain of between 10 and 1500 amino acids that binds
5 to a cell surface receptor on the mucosal surface; (2) a translocation domain comprising
6 an amino acid sequence substantially identical to a sequence of PE domain II sufficient to
7 effect translocation to a cell cytosol; (3) a foreign epitope domain comprising an amino
8 acid sequence of between 5 and 1500 amino acids that encodes a foreign epitope; and (4)
9 an amino acid sequence encoding an endoplasmic reticulum ("ER") retention domain that
10 comprises an ER retention sequence.

1 2. The method of claim 1 wherein the mucosal surface is selected
2 from mouth, nose, lung, gut, vagina, colon or rectum.

1 3. The method of claim 1 comprising administering a booster dose of
2 the chimeric immunogen to a different mucosal surface.

1 4. The method of claim 1 further comprising administering to the
2 subject a booster dose of the chimeric immunogen parenterally.

1 5. The method of claim 1 further comprising administering to the
2 subject a booster dose of the chimeric immunogen to a mucosal surface.

1 6. The method of claim 1 further comprising administering to the
2 subject a booster dose of the chimeric immunogen to a mucosal surface at least one year
3 after an initial dose.

1 7. The method of claim 1 wherein the foreign epitope comprises a V3
2 loop apex of HIV-1.

1 8. A composition comprising secretory IgA antibodies that specifically
2 recognize an epitope of HIV-1.

1 9. The composition of claim 8 wherein the foreign epitope comprises
2 a V3 loop apex of HIV-1.

1 10. The composition of claim 8 wherein the foreign epitope is an
2 epitope of herpes, vaccinia, cytomegalovirus, yersinia or vibrio.

1 11. The composition of claim 8 produced by administering to at least
2 one mucosal surface of a subject a non-toxic Pseudomonas exotoxin A-like ("PE-like")
3 chimeric immunogen comprising: (1) a cell recognition domain of between 10 and 1500
4 amino acids that binds to a cell surface receptor on the mucosal surface; (2) a
5 translocation domain comprising an amino acid sequence substantially identical to a
6 sequence of PE domain II sufficient to effect translocation to a cell cytosol; (3) a foreign
7 epitope domain comprising an amino acid sequence of between 5 and 1500 amino acids
8 that encodes a an epitope of HIV-1; and (4) an amino acid sequence encoding an
9 endoplasmic reticulum ("ER") retention domain that comprises an ER retention sequence.